Table 18: Summary of Structural Forms Estimation

DEPENDENT VARIABLE	EXOGENOUS DOCS: SUPPLY EQ.	EXOGENOUS DOCS: DEMAND EQ.	EXOGENOUS DOCS: HAUSMAN TEST	ENDOGENOUS DOCS^: SUPPLY EQ.	ENDOGENOUS DOCS^: DEMAND EQ.
IPDPRICE Price per inpatient day	-- ipdcap^	NA	E^ not sig. -- ipdcap^	NA, passed Hausman test	NA, passed Hausman test
IPDCAP Inpatient days per 1000	NA	-- ipdprice^	NA	NA	NA
ADMPRICE price per inpatient admission	-- admcap^ ++ docs -- residents - specialists	NA	-- E^ -- admcap^ ++ docs -- residents - specialists	-- admcap^ ++ docs^ -- residents - specialists	NA
ADMCAP inpatient admissions per 1000	NA	-- admprice^	NA	NA	-- admprice^ - ESI
OPPRICE price per outpatient visit	++ opviscap^ -- specialists	NA	-- E^ ++ docs -- residents -- specialists	++ docs^ -- residents -- specialists	NA
OPVISCAP outpatient visits per 1000	NA	++ opprice^ - uninsured -- ESI -- HMO + income ++ service&retail	NA	NA	++ opprice^ - uninsured -- ESI -- HMO + income + service&retail

E^ = error term from reduced form estimate of DOCCAP
E^ significantly different from zero indicates the Hausman specification test for exogeneity was failed

LEGEND:

Symbol	(Prob>|T|)
++, --	< 0.05
+, -	< 0.10

Table 19a

IPDPRICE Supply Equation (Exogenous DOCCAP)

```
                                                Fixed-effects (within) regression
sd(u_allstat)                 =  1454.038               Number of obs =       150
sd(e_allstat_t)               =  53.28834                     n =        50
sd(e_allstat_t + u_allstat)   =  1455.014                     T =         3

corr(u_allstat, Xb)           =   -0.9925               R-sq within   =  0.7681
                                                             between  =  0.0579
                                                             overall  =  0.0545

                                                        F(  6,    94) =   51.90
                                                             Prob > F =  0.0000

------------------------------------------------------------------------------
ipdprice |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
  ipdhat |   -2.73369   .2878685     -9.496   0.000       -3.30526   -2.162121
  bedcap |   42.66144   52.88938      0.807   0.422      -62.35166    147.6745
  doccap |    19.8159   262.2979      0.076   0.940      -500.9826    540.6144
  resbed |   -1.16761   1.068599     -1.093   0.277      -3.289338    .9541178
 specgen |  -141.6131   94.31226     -1.502   0.137      -328.8723    45.64615
awpfocpr |   24.29056   66.98812      0.363   0.718      -108.7159     157.297
   _cons |   3094.096   574.8816      5.382   0.000       1952.655    4235.537
------------------------------------------------------------------------------
 allstat |            F(49,94) =     16.950   0.000           (50 categories)
```

Table 19b

IPDCAP Demand Equation (Exogenous DOCCAP)

```
                                                Fixed-effects (within) regression
sd(u_allstat)                 =  557.8108               Number of obs =     150
sd(e_allstat_t)               =  24.10402                     n =      50
sd(e_allstat_t + u_allstat)   =  558.3314                     T =       3

corr(u_allstat, Xb)           =   -0.9469               R-sq within   =  0.7106
                                                             between  =  0.0024
                                                             overall  =  0.0032

                                                        F( 14,    86) =   15.08
                                                             Prob > F =  0.0000

------------------------------------------------------------------------------
  ipdcap |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
  ipphat |  -.6077937     .11398     -5.332   0.000      -.8343784   -.3812091
perblack |   1.858908   39.58587      0.047   0.963      -76.83519    80.55301
perasian |    33.1402   53.85116      0.615   0.540      -73.91235    140.1928
 perhisp |   67.82099   29.31121      2.314   0.023       9.552246    126.0897
peryoung |  -22.63048   21.00585     -1.077   0.284      -64.38872    19.12775
  perold |   50.81462   31.85439      1.595   0.114      -12.50981    114.1391
 uninsur |  -3.039345   2.364486     -1.285   0.202      -7.739787    1.661097
permcaid |    1.51438   4.643162      0.326   0.745      -7.715919    10.74468
  peresi |  -3.594056   2.380597     -1.510   0.135      -8.326527    1.138414
     hmo |   .6130054    1.39929      0.438   0.662       -2.16869    3.394701
  medinc |   5.599382   3.440752      1.627   0.107      -1.240606    12.43937
pservret |  -280.1371   243.2944     -1.151   0.253      -763.7903    203.5162
 psfrm25 |  -49.84109   124.9354     -0.399   0.691      -298.2044    198.5223
 bc_drug |   2.293151   31.13811      0.074   0.941      -59.60736    64.19367
   _cons |   1036.706   590.1862      1.757   0.083      -136.5448    2209.958
------------------------------------------------------------------------------
 allstat |            F(49,86) =     48.935   0.000           (50 categories)
```

Table 19c

Hausman Test on the IPDPRICE Supply Equation (Exogenous DOCCAP)

```
                                                Fixed-effects (within) regression
sd(u_allstat)                 =   1810.84               Number of obs =     150
sd(e_allstat_t)               =  53.30592                     n =      50
sd(e_allstat_t + u_allstat)   =  1811.624                     T =       3

corr(u_allstat, Xb)           =   -0.9950               R-sq within   =  0.7704
                                                             between  =  0.0330
                                                             overall  =  0.0315

                                                        F(  7,    93) =   44.59
                                                             Prob > F =  0.0000

------------------------------------------------------------------------------
ipdprice |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
  ipdhat |  -2.505362   .3721596     -6.732   0.000      -3.244397   -1.766326
  bedcap |   20.59607   57.60377      0.358   0.721      -93.79359    134.9857
  doccap |   410.8343   481.5047      0.853   0.396      -545.3386    1367.007
  resbed |  -1.836412   1.272602     -1.443   0.152      -4.363548    .6907245
 specgen |   -138.939   94.38377     -1.472   0.144      -326.3665    48.48844
awpfocpr |   9.820233   68.65567      0.143   0.887      -126.5163    146.1568
    ehat |  -480.7365   496.3697     -0.969   0.335      -1466.428    504.9553
   _cons |   2318.672   985.7648      2.352   0.021       361.1385    4276.205
------------------------------------------------------------------------------
 allstat |            F(49,93) =     16.403   0.000           (50 categories)
```

Table 19d

ADMPRICE Supply Equation (Exogenous DOCCAP)

```
                                                Fixed-effects (within) regression
sd(u_allstat)                 =  7809.889              Number of obs =     150
sd(e_allstat_t)               =  247.8155                    n =      50
sd(e_allstat_t + u_allstat)   =   7813.82                    T =       3

corr(u_allstat, Xb)           =   -0.9948              R-sq within   =  0.7720
                                                            between  =  0.2664
                                                            overall  =  0.2299

                                                       F(  6,    94) =   53.06
                                                            Prob > F =  0.0000

------------------------------------------------------------------------------
admprice |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
  admhat |  -108.5199   12.17719     -8.912   0.000       -132.698   -84.34183
  bedcap |   109.8267   237.4934      0.462   0.645       -361.722    581.3755
  doccap |   4780.388   1009.837      4.734   0.000       2775.333    6785.444
  resbed |  -13.36842   4.939946     -2.706   0.008       -23.1768   -3.560041
 specgen |  -857.9135    440.548     -1.947   0.054      -1732.632    16.80492
awpfocpr |  -63.88401   312.4401     -0.204   0.838      -684.2412    556.4732
   _cons |   11669.69   2575.165      4.532   0.000       6556.637    16782.74
------------------------------------------------------------------------------
 allstat |            F(49,94) =     23.665   0.000           (50 categories)
```

Table 19e

ADMCAP Demand Equation (Exogenous DOCCAP)

```
                                                Fixed-effects (within) regression
sd(u_allstat)                 =  77.46281               Number of obs =     150
sd(e_allstat_t)               =   3.06835                     n =      50
sd(e_allstat_t + u_allstat)   =  77.52355                     T =       3

corr(u_allstat, Xb)           =   -0.9666               R-sq within   =  0.5519
                                                             between  =  0.0046
                                                             overall  =  0.0051

                                                        F( 14,    86) =    7.57
                                                             Prob > F =  0.0000

------------------------------------------------------------------------------
      admcap |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
-------------+----------------------------------------------------------------
     admphat |  -.0087853   .0036959     -2.377   0.020      -.0161325    -.001438
    perblack |   -.932951   5.371987     -0.174   0.863      -11.61211    9.746205
    perasian |   .1888655   7.345192      0.026   0.980      -14.41289    14.79062
     perhisp |   .5519339   3.464175      0.159   0.874      -6.334618    7.438486
    peryoung |   2.147073   2.506911      0.856   0.394        -2.8365    7.130647
      perold |   8.768876   5.023541      1.746   0.084      -1.217591    18.75534
     uninsur |   -.304064    .300675     -1.011   0.315      -.9017862    .2936581
    permcaid |  -.0710407   .6056877     -0.117   0.907      -1.275108    1.133027
      peresi |  -.3701194   .3117889     -1.187   0.238      -.9899352    .2496965
         hmo |   .1040519   .1900138      0.548   0.585       -.273683    .4817867
      medinc |   -.094115   .4779816     -0.197   0.844      -1.044311     .856081
    pservret |  -31.28166   34.32145     -0.911   0.365      -99.51043    36.94711
     psfrm25 |   18.74429   16.31184      1.149   0.254      -13.68259    51.17116
     bc_drug |   .5550394   3.942494      0.141   0.888      -7.282379    8.392458
       _cons |   37.80873   91.37865      0.414   0.680       -143.846    219.4635
------------------------------------------------------------------------------
     allstat |            F(49,86) =     30.556   0.000           (50 categories)
```

Table 19f

Hausman Test on the ADMPRICE Supply Equation (Exogenous DOCCAP)

```
                                                Fixed-effects (within) regression
sd(u_allstat)                 =  14429.95               Number of obs =     150
sd(e_allstat_t)               =  237.8803                     n =      50
sd(e_allstat_t + u_allstat)   =  14431.91                     T =       3

corr(u_allstat, Xb)           =   -0.9983               R-sq within   =  0.7922
                                                             between  =  0.1822
                                                             overall  =  0.1539

                                                        F(  7,    93) =   50.65
                                                             Prob > F =  0.0000

------------------------------------------------------------------------------
admprice |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
  admhat |  -84.57125   14.15085     -5.976   0.000       -112.672   -56.47047
  bedcap |   -111.342   239.5761     -0.465   0.643      -587.0927    364.4086
  doccap |   8939.629   1690.678      5.288   0.000       5582.278    12296.98
  resbed |  -20.99578   5.379429     -3.903   0.000      -31.67827    -10.3133
 specgen |  -810.7683   423.1773     -1.916   0.058      -1651.115    29.57789
awpfocpr |  -186.6143   302.6865     -0.617   0.539      -787.6897     414.461
    ehat |  -6230.271   2074.923     -3.003   0.003      -10350.66   -2109.886
   _cons |    2364.24   3964.174      0.596   0.552      -5507.824     10236.3
------------------------------------------------------------------------------
 allstat |            F(49,93) =     25.790   0.000           (50 categories)
```

Table 19g

OPPRICE Supply Equation (Exogenous DOCCAP)

```
                                                Fixed-effects (within) regression
sd(u_allstat)                 =  199.1964               Number of obs =     150
sd(e_allstat_t)               =  23.64346                     n =      50
sd(e_allstat_t + u_allstat)   =  200.5946                     T =       3

corr(u_allstat, Xb)           =   -0.9501               R-sq within   =  0.5304
                                                             between  =  0.0072
                                                             overall  =  0.0116

                                                        F(  6,    94) =   17.70
                                                             Prob > F =  0.0000

------------------------------------------------------------------------------
 opprice |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
opvishat |   .3903925   .1244184      3.138   0.002       .1433569    .6374282
  bedcap |  -12.16443   25.62393     -0.475   0.636      -63.04135    38.71249
  doccap |   196.9458   132.1617      1.490   0.140      -65.46426    459.3559
  resbed |  -.2440731   .5052932     -0.483   0.630      -1.247345    .7591983
 specgen |  -118.9511   40.48345     -2.938   0.004      -199.3319   -38.57028
awpfocpr |   .8876542   29.76151      0.030   0.976      -58.20451    59.97982
   _cons |  -70.19222   179.5407     -0.391   0.697      -426.6745    286.2901
------------------------------------------------------------------------------
 allstat |            F(49,94) =     20.197   0.000           (50 categories)
```

Table 19h

OPVISCAP Demand Equation (Exogenous DOCCAP)

```
                                                Fixed-effects (within) regression
sd(u_allstat)                 =  555.1187               Number of obs =     150
sd(e_allstat_t)               =  36.75197                     n =      50
sd(e_allstat_t + u_allstat)   =   556.334                     T =       3

corr(u_allstat, Xb)           =   -0.9596               R-sq within   =  0.5485
                                                             between  =  0.0028
                                                             overall  =  0.0016

                                                        F( 14,    86) =    7.46
                                                             Prob > F =  0.0000

------------------------------------------------------------------------------
opviscap |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
  opphat |   3.250412   .7778123      4.179   0.000       1.704173    4.796652
perblack |  -149.8557   75.46851     -1.986   0.050      -299.8821    .1707507
perasian |  -94.45843   81.64809     -1.157   0.251      -256.7695     67.8526
 perhisp |  -176.2631   55.26992     -3.189   0.002       -286.136   -66.39009
peryoung |   108.3242   45.18659      2.397   0.019       18.49628    198.1522
  perold |  -205.8886   64.33614     -3.200   0.002      -333.7846   -77.99257
 uninsur |  -7.546276    3.99574     -1.889   0.062      -15.48954    .3969921
permcaid |  -7.646781   7.917898     -0.966   0.337      -23.38704    8.093479
  peresi |   -8.55843   3.407317     -2.512   0.014      -15.33195   -1.784908
     hmo |  -7.433877    2.49855     -2.975   0.004      -12.40083   -2.466924
  medinc |   6.565319   3.671132      1.788   0.077      -.7326495    13.86329
pservret |   1078.808   458.6206      2.352   0.021       167.1002    1990.515
 psfrm25 |  -100.7461   196.7958     -0.512   0.610      -491.9631    290.4709
 bc_drug |   34.95039   49.80349      0.702   0.485      -64.05567    133.9564
   _cons |   2118.072    926.345      2.286   0.025       276.5593    3959.585
------------------------------------------------------------------------------
 allstat |            F(49,86) =     30.065   0.000           (50 categories)
```

Table 19i

Hausman Test on the OPPRICE Supply Equation (Exogenous DOCCAP)

```
                                                Fixed-effects (within) regression
sd(u_allstat)                  =  973.5127      Number of obs =     150
sd(e_allstat_t)                =  22.36541                 n =      50
sd(e_allstat_t + u_allstat)    =  973.7695                 T =       3

corr(u_allstat, Xb)            =   -0.9980      R-sq within   =  0.5843
                                                     between  =  0.0650
                                                     overall  =  0.0502

                                                F(  7,    93) =   18.67
                                                     Prob > F =  0.0000

------------------------------------------------------------------------------
 opprice |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
opvishat |   .1603235   .1350715      1.187   0.238      -.1079018    .4285487
  bedcap |  -41.83687    25.7019     -1.628   0.107      -92.87575    9.202003
  doccap |    716.603   195.0376      3.674   0.000       329.2971    1103.909
  resbed |   -1.34963   .5743661     -2.350   0.021      -2.490207   -.2090526
 specgen |  -88.30967   39.29927     -2.247   0.027      -166.3502   -10.26911
awpfocpr |  -13.70554    28.4649     -0.481   0.631      -70.23118     42.8201
    ehat |  -641.9803   184.9388     -3.471   0.001      -1009.232   -274.7285
   _cons |  -733.6894   255.6905     -2.869   0.005       -1241.44   -225.9388
------------------------------------------------------------------------------
 allstat |            F(49,93) =     21.506   0.000           (50 categories)
```

Table 19j

ADMPRICE Supply Equation (Endogenous DOCCAP)

```
                                                Fixed-effects (within) regression
sd(u_allstat)                 =  18102.67               Number of obs =     150
sd(e_allstat_t)               =  242.7396                     n =      50
sd(e_allstat_t + u_allstat)   =   18104.3                     T =       3

corr(u_allstat, Xb)           =   -0.9989               R-sq within   =  0.7813
                                                             between  =  0.1527
                                                             overall  =  0.1282

                                                        F(  6,    94) =   55.96
                                                             Prob > F =  0.0000

------------------------------------------------------------------------------
admprice |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
  admhat |  -84.57118   14.43992     -5.857   0.000       -113.242   -55.90038
  dochat |   8939.634   1725.214      5.182   0.000       5514.183    12365.09
  bedcap |  -111.3423   244.4701     -0.455   0.650      -596.7435    374.0589
  resbed |  -20.99579   5.489318     -3.825   0.000      -31.89496   -10.09662
 specgen |   -810.769   431.8218     -1.878   0.064      -1668.161    46.62335
awpfocpr |  -186.6149   308.8697     -0.604   0.547      -799.8828    426.6531
   _cons |   2364.224   4045.152      0.584   0.560      -5667.519    10395.97
------------------------------------------------------------------------------
 allstat |            F(49,94) =     29.865   0.000           (50 categories)
```

Table 19k

ADMCAP Demand Equation (Endogenous DOCCAP)

```
                                                Fixed-effects (within) regression
sd(u_allstat)                 =  89.73316               Number of obs =     150
sd(e_allstat_t)               =  3.010773                     n =      50
sd(e_allstat_t + u_allstat)   =  89.78365                     T =       3

corr(u_allstat, Xb)           =   -0.9757               R-sq within   =  0.5736
                                                             between  =  0.0235
                                                             overall  =  0.0239

                                                        F( 15,    85) =    7.62
                                                             Prob > F =  0.0000

------------------------------------------------------------------------------
      admcap |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
-------------+----------------------------------------------------------------
     admphat |  -.0142592   .0052939     -2.694   0.009      -.0247849   -.0037335
      dochat |  -8.219221    31.5148     -0.261   0.795      -70.87909    54.44064
    perblack |   2.779248   5.898825      0.471   0.639      -8.949196    14.50769
    perasian |   7.726104   8.652001      0.893   0.374      -9.476392     24.9286
     perhisp |   2.319129   4.755829      0.488   0.627      -7.136733    11.77499
    peryoung |   1.898139   2.466859      0.769   0.444      -3.006638    6.802916
      perold |   13.52933   5.502608      2.459   0.016        2.58867    24.46998
     uninsur |  -.3369943   .3121313     -1.080   0.283      -.9575949    .2836063
    permcaid |   .5379968   .6810796      0.790   0.432      -.8161718    1.892165
      peresi |  -.5840815   .3474079     -1.681   0.096      -1.274821    .1066585
         hmo |   .0108135   .2041786      0.053   0.958      -.3951482    .4167752
      medinc |   .4736004   .5973902      0.793   0.430      -.7141713    1.661372
    pservret |  -58.48601   37.17898     -1.573   0.119      -132.4078    15.43576
     psfrm25 |   12.51529   16.32086      0.767   0.445      -19.93496    44.96554
     bc_drug |  -.3823519   3.921345     -0.098   0.923      -8.179035    7.414332
       _cons |  -32.14174   117.0751     -0.275   0.784      -264.9184    200.6349
-------------+----------------------------------------------------------------
     allstat |            F(49,85) =     16.787   0.000           (50 categories)
------------------------------------------------------------------------------
```

Table 19l

OPPRICE Supply Equation (Endogenous DOCCAP)

```
                                                Fixed-effects (within) regression
sd(u_allstat)                 =  1193.135               Number of obs =       150
sd(e_allstat_t)               =  22.46885                     n =        50
sd(e_allstat_t + u_allstat)   =  1193.346                     T =         3

corr(u_allstat, Xb)           =   -0.9987               R-sq within   =  0.5759
                                                             between  =  0.0686
                                                             overall  =  0.0537

                                                        F(  6,    94) =   21.28
                                                             Prob > F =  0.0000

------------------------------------------------------------------------------
 opprice |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
opvishat |   .1603238   .1356964      1.181   0.240      -.1091045    .4297521
  dochat |   716.6018   195.9398      3.657   0.000       327.5588    1105.645
  bedcap |  -41.83684   25.82078     -1.620   0.109      -93.10461    9.430921
  resbed |  -1.349627   .5770228     -2.339   0.021      -2.495319   -.2039348
 specgen |  -88.30976   39.48104     -2.237   0.028      -166.7003   -9.919238
awpfocpr |  -13.70555   28.59655     -0.479   0.633      -70.48467    43.07358
   _cons |  -733.6876   256.8731     -2.856   0.005      -1243.715     -223.66
------------------------------------------------------------------------------
 allstat |            F(49,94) =     21.285   0.000           (50 categories)
```

Table 19m

OPVISCAP Demand Equation (Endogenous DOCCAP)

```
                                                Fixed-effects (within) regression
sd(u_allstat)                 =  638.4041               Number of obs =     150
sd(e_allstat_t)               =  38.31066                     n =      50
sd(e_allstat_t + u_allstat)   =  639.5525                     T =       3

corr(u_allstat, Xb)           =   -0.9697               R-sq within   =  0.5151
                                                             between  =  0.0007
                                                             overall  =  0.0003

                                                        F( 15,    85) =    6.02
                                                             Prob > F =  0.0000

------------------------------------------------------------------------------
opviscap |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
  opphat |   2.961126   1.139165      2.599   0.011       .6961606    5.226092
  dochat |   307.1528   379.9013      0.809   0.421      -448.1928    1062.498
perblack |  -131.0218   93.90834     -1.395   0.167      -317.7367    55.69315
perasian |  -142.1333   106.8587     -1.330   0.187      -354.5969    70.33042
 perhisp |  -141.0702   82.24313     -1.715   0.090      -304.5916    22.45114
peryoung |   95.62462   58.60895      1.632   0.106      -20.90568    212.1549
  perold |  -203.9577   76.94229     -2.651   0.010      -356.9395   -50.97579
 uninsur |  -7.607762   4.454347     -1.708   0.091       -16.4642    1.248672
permcaid |  -9.814017   9.715558     -1.010   0.315      -29.13115    9.503115
  peresi |  -8.389012   3.646294     -2.301   0.024      -15.63882   -1.139203
     hmo |  -7.140823   2.882996     -2.477   0.015      -12.87299   -1.408655
  medinc |    6.57867   3.934182      1.672   0.098      -1.243537    14.40088
pservret |   1015.332   552.3232      1.838   0.070      -82.83455    2113.498
 psfrm25 |  -63.16366   216.0747     -0.292   0.771      -492.7781    366.4508
 bc_drug |   28.65866    54.9115      0.522   0.603      -80.52011    137.8374
   _cons |   1763.862   1084.523      1.626   0.108      -392.4598    3920.184
------------------------------------------------------------------------------
 allstat |            F(49,85) =     25.892   0.000           (50 categories)
```

Table 20: Estimated Effect of Physician Supply per 1000

DEPENDENT VARIABLE	REDUCED FORM	STRUCTURAL FORM
Inpatient Expenditures	Positive, Elasticity = .99	Positive, Elasticity = .54
Outpatient Expenditures	Positive, Elasticity = 2.71	Positive, Elasticity = 10.1